

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENT W. LEYDE and DANIEL J. POWERS

Appeal No. 2001-2340
Application No. 09/141,707

ON BRIEF

Before URYNOWICZ, JERRY SMITH and GROSS, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

Decision on Appeal

This appeal is from the final rejection of claims 1-12, 14-25 and 33-38.

The invention pertains to a battery system. Claim 1 is illustrative and reads as follows:

1. A battery system operable to provide energy to a load, the battery system comprising:

a main battery cell having a first charge-storage capacity and storing a charge;

Appeal No. 2001-2340
Application No. 09/141,707

a sense battery cell coupled in series with the main battery cell and having a second charge-storage capacity that is less than the first charge-storage capacity; and

a battery-charge indicator operable to monitor a parameter of the sense battery cell and to determine the charge on the main batter cell from the monitored parameter.

The references relied upon by the examiner are:

Kuo et al. (Kuo)	5,250,905	Oct. 05, 1993
Cameron et al. (Cameron)	5,483,165	Jan. 09, 1996

Claims 1, 6, and 7 stand rejected under 35 U.S.C.
§ 102(b) as anticipated by Cameron.

Claims 10-12 stand rejected under 35 U.S.C. § 102(b) as anticipated by Kuo.

Claims 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cameron.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuo.

Claims 1-5, 15-25 and 33-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cameron in view of Kuo.

The respective positions of the examiner and appellants with regard to the propriety of these rejections are set forth in the examiner's answer (Paper No. 15) and the appellants' brief and reply brief (Paper Nos. 14 and 16, respectively).

Appellants' Invention

The invention is described in the third paragraph of page 3 of the brief and in the paragraph bridging pages 3 and 4.

The Prior Art

In Figure 2, Cameron discloses a battery monitor and capacity indicator that uses a sense cell 22 in addition to a main battery 10 to determine main battery remaining capacity and depletion condition. A parameter of the sense cell is related to the main battery capacity so that the main battery will have a minimum capacity remaining when the sense cell parameter reaches a particular value or crosses a particular threshold. The sense cell is a battery which is identical and of the same manufacturing lot as the battery cell or cells in the main battery pack. Utilizing a load 30, a current is drawn from the sense cell that is larger than the current being drawn from the main battery. When the sense cell is fully depleted, the main battery will have a remaining capacity whose magnitude depends on the relationship between the main battery current and the sense cell current.

Kuo discloses an electrochemical cell 50 with an integrally related state of charge indicator 60 comprising an electrochemically generated display. The state of charge indicator

comprises two electrical contacts and an electro-chemically generated display connected therebetween. Cell 50 and indicator 60 are connected in parallel via the contacts.

Grouping of Claims

At pages 7 and 8 of the brief, appellants indicated there are six groups of claims which stand or fall alone.

The Rejection under 35 U.S.C. § 102(b)

Claims 1, 6 and 7

As to claim 1, appellants submit that, unlike the charge-storage capacity of the claimed sense battery cell, the charge-storage capacity of Cameron's sense cell 22 is not less than the charge-storage capacity of one of Cameron's main cells 20. It is urged that, based on the ordinary meanings of battery and battery cell as in the technical dictionary titled "Dictionary of Technical Terms" (Appendix B to the brief), one cannot interpret main battery cell in claim 1 as a battery, and thus cannot interpret main battery cell in claim 1 as reading on Cameron's battery 10.

With respect to claims 6 and 7, appellants argue that in Figure 2, Cameron discloses a sense cell 22 that stores the same charge as each main cell 20 before the cells 20 first discharge through a system load 24. In contrast, attention is drawn to the

fact that independent claim 6 defines a sense battery cell that stores a second charge smaller than the first charge on a main battery cell before the main battery cell first discharges through a load.

We agree with appellants that the claimed main battery cell is not met by Cameron's battery 10 or any combination of cells 20. Accordingly, we will not sustain the rejection of claims 1, 6 and 7 based on the rationale set forth by the examiner to the effect that two or more cells 20 of Cameron form a main battery cell. It is well-established that the meaning of a claim term may be ascertained from dictionaries, encyclopedias and treatises. In re Ripper, 171 F.2d 297, 299, 80 USPQ 96, 98 (CCPA 1948). It is also clear that the "Dictionary of Technical Terms" supports appellants' position that Cameron's battery 10, or any combination of cells 20, does not meet the claimed main battery cell because a battery is not a cell, and because a plurality of cells do not form a larger cell, but, instead, they form a battery.

The Rejection under 35 U.S.C. § 102(b)

Claims 10-12

We will not sustain this rejection. The examiner has not responded to the appellants' position that Kuo teaches an

Appeal No. 2001-2340
Application No. 09/141,707

indicator cell 60 that is coupled in parallel, not in series, with a battery cell 50. Whereas independent claim 10 defines serially coupled cells and Kuo in fact teaches cells coupled in parallel, Kuo does not anticipate the subject matter of claims 10-12.

The Rejection under 35 U.S.C. § 103(a)

Claims 8 and 9

These claims depend from claim 6. Accordingly, the rejection of these claims will not be sustained for the same reasons that the rejection of claim 6 will not be sustained.

The Rejection under 35 U.S.C. § 103(a)

Claim 14

Claim 14 depends directly from claim 10. The examiner has not addressed the question of why it would have been obvious to couple Kuo's cells serially, rather than in parallel as taught by Kuo. Accordingly, we will not sustain the rejection of claim 14.

The Rejection under 35 U.S.C. § 103(a)

Claims 1-5, 15-25 and 33-38

We will not sustain the rejection of these claims based on the rationale set forth by the examiner. It is considered that the examiner has not set forth a *bone fide* motivation for combining the teachings of the two references. In the paragraph

bridging pages 6 and 7, the answer merely quotes specific portions of the Cameron and Kuo disclosures without explaining how they suggest the claimed subject matter. This is inadequate on its face. In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993).

NEW GROUNDS OF REJECTION PURSUANT TO 37 CFR 1.196(b)

Claims 1, 2, 4, 6, 7, 18-23 and 33-38

Claims 1, 2, 4, 6, 7, 18-23 and 33-38 are rejected as anticipated by Cameron under 35 U.S.C. § 102(b).

With respect to claims 1, 2, 18-20, 23 and 33, at column 2, lines 58-61, Cameron, which is commonly assigned with appellants' application, teaches that output 16 provides information regarding the remaining capacity of main battery 10. Thus, according to Cameron, the term "capacity" generally relates to the amount of charge in main battery 10, and each of cells 20, at any given instant, and not to the maximum storage capacity of a battery or cell. Similarly, the term "capacity" is not limited to the maximum charge-storage capacity of the main battery in appellants' disclosure. Appellants use the term "capacity" to refer to the amount of charge in a cell or battery at a given

time. See appellants' specification at page 1, lines 25-27, page 2, lines 15-24, page 3, lines 8 and 9, page 6, lines 27 and 28, and page 7, line 29, to page 8, line 13. At column 3, lines 26-35, Cameron teaches that sense cell 22 (Figure 2) is depleted faster than main battery 10. Accordingly, during periods of use when depletion occurs in the batteries and cells, sense cell 22 has a second charge-storage capacity that is less than the charge-storage capacity of main battery 10- -which may be a single cell 20- -because sense cell 22 is depleted faster than main battery 10. See column 2, line 66, to column 3, line 77 of Cameron for the teaching that battery 10 may be a single cell, and column 3, lines 26-35, for the teaching that sense cell 22 is depleted faster than main battery 10.

As to claims 4, 6, 7, 21, 22 and 34-38, at column 4, lines 29-36, Cameron teaches a rechargeable battery as a sense cell starting from a depleted condition when the main battery is fully charged. In this embodiment, a sense battery cell stores a second, depleted charge smaller than the first, full charge on the main battery cell before the main battery cell first discharges through the load.

Claims 3, 5, 8, 9, 24 and 25

Claims 3, 5, 8, 9, 24 and 25 are rejected as obvious over Cameron under 35 U.S.C. § 103(a). These dependent claims are not separately argued by appellants and we agree with the examiner's position in the answer that utilizing battery cells that are of certain material, or rechargeable, would have been obvious to one of ordinary skill in the art at the time the invention was made.

Claims 10-12 and 14-17

Claims 10-12 and 14-17 are rejected as unpatentable over Cameron in view of Kuo or a flashlight under 35 U.S.C. § 103(a). As noted above, Cameron teaches a main battery cell having a second charge-storage capacity that is greater than a first charge-storage capacity in a sense battery cell. The only difference between Cameron and claims 10-12, 15 and 17 is that the claims require a housing for the batteries and Cameron is silent with respect to a housing. However, Kuo or a flashlight teaches a battery housing for holding batteries together in a circuit configuration. It would have been obvious to couple together Cameron's cells in a housing for easy removal, as in a flashlight, or to assemble the cells together as a unit for compactness and ease of use, as in Kuo or a flashlight.

Dependent claim 14 merely recites that the main battery cell is rechargeable and dependent claim 16 that the sense battery

Appeal No. 2001-2340
Application No. 09/141,707

cell and the main battery cell are lithium manganese dioxide battery cells. These claims were not separately argued by appellants and they are considered unpatentable because utilizing cells that are rechargeable or made of lithium manganese dioxide would have been a matter of design choice and obvious to one of ordinary skill in the art at the time the invention was made.

Summary

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED - § 1.196(b)

STANELY M. URYNOWICZ JR.)	
Administrative Patent Judge)	
)	
)	
)	
)	
JERRY SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
)	
ANITA PELLMAN GROSS)	
Administrative Patent Judge)	

SU/RWK